

Fig. 1

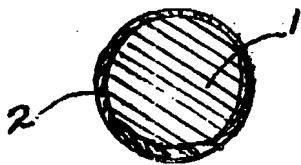


Fig. 2

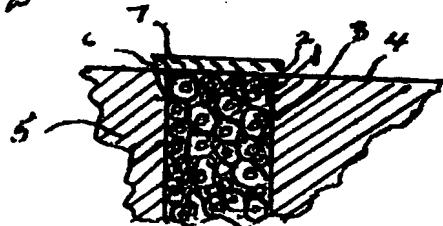


Fig. 3

Paste ID	Filler (wt%)	Resin (%)	Reflow condition	Electrical (mean/st'd)	Mechanical (mean/st'd)	Remark
AgCu01	Ag & Cu (>93)	epoxy	150C, 25psi 30 min	0.00040 (0.00002)	4.3(0.9) N/A N/A	commercial paste
BiSn48	BiSn/Cu (68)	epoxy(85) phoxy(10) flux(4)	188C, 50 psi 30 min	0.00041 (0.00006)	6.7(0.5) N/A N/A	medium flow resin
BiSn49	BiSn/Cu (76)	epoxy(43) lim-ox(43) phoxy(10) flux(4)	188C, 25psi 30 min	0.00027 (0.00004)	5.4(0.9) N/A N/A	high flow resin
BiSn53	BiSn/Cu (77)	epoxy(43) lim-ox(43) phoxy(10) flux(4)	188C, 25psi 30 min	0.00023 (0.00003)	5.1(0.3) N/A N/A	high flow resin
BiSn54	BiSn/Cu (81)	lim-ox(88) epoxy(4) phoxy(4) flux(4)	188C, 25psi 30 min	0.00018 (0.00002)	3.4(0.3) N/A N/A	very high flow resin

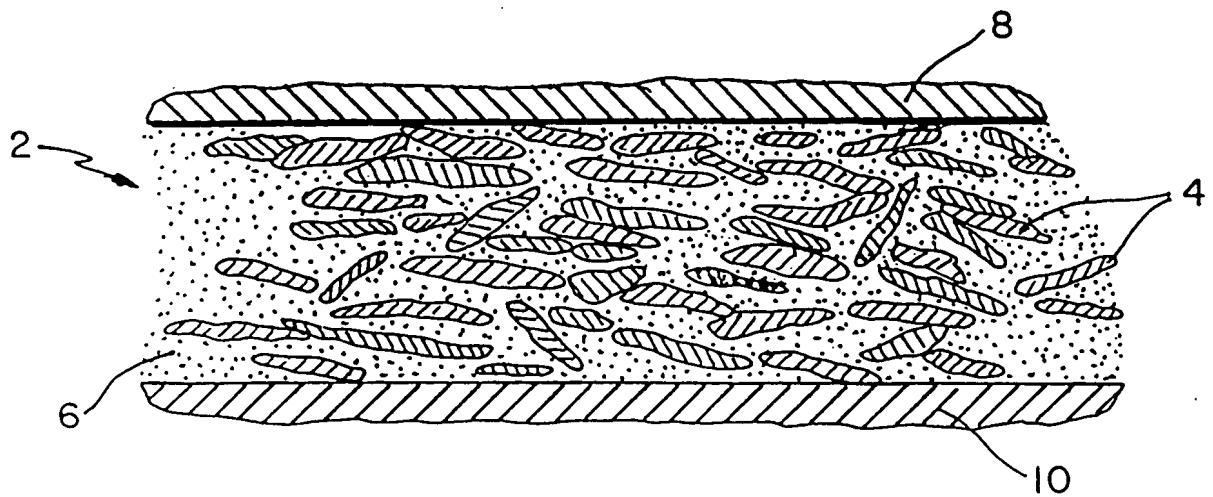


FIG. 1

FIG. 2A

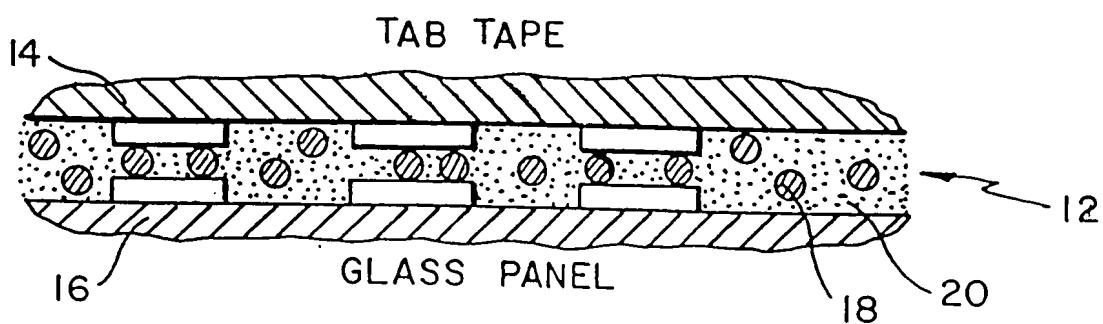
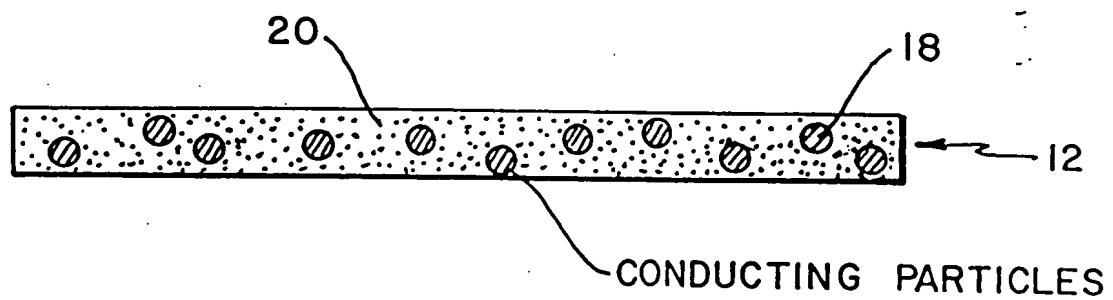


FIG. 2B

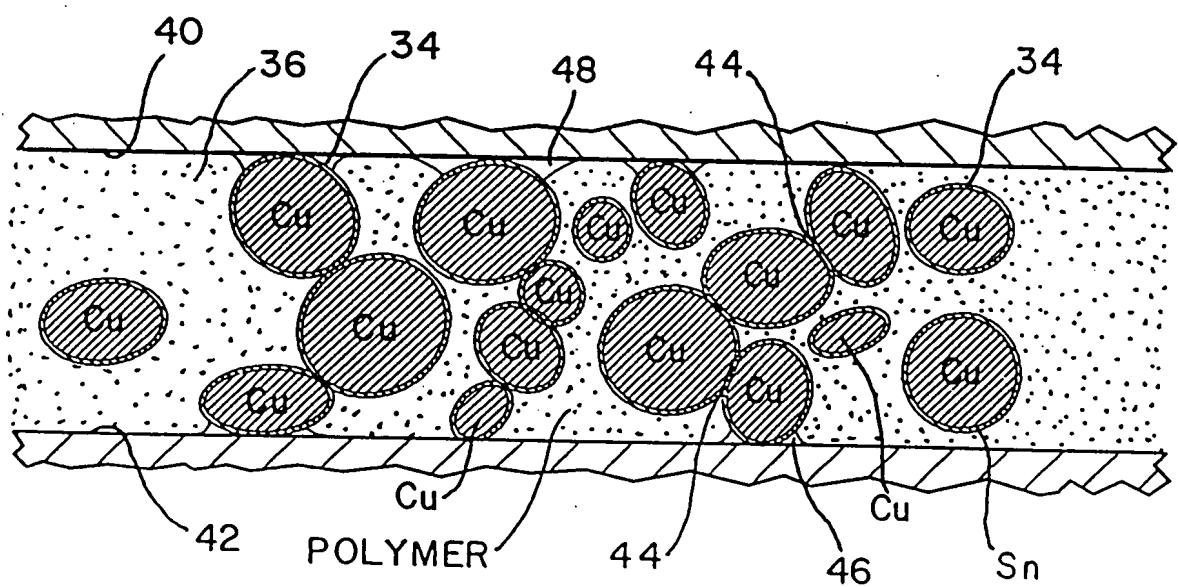


FIG. 3

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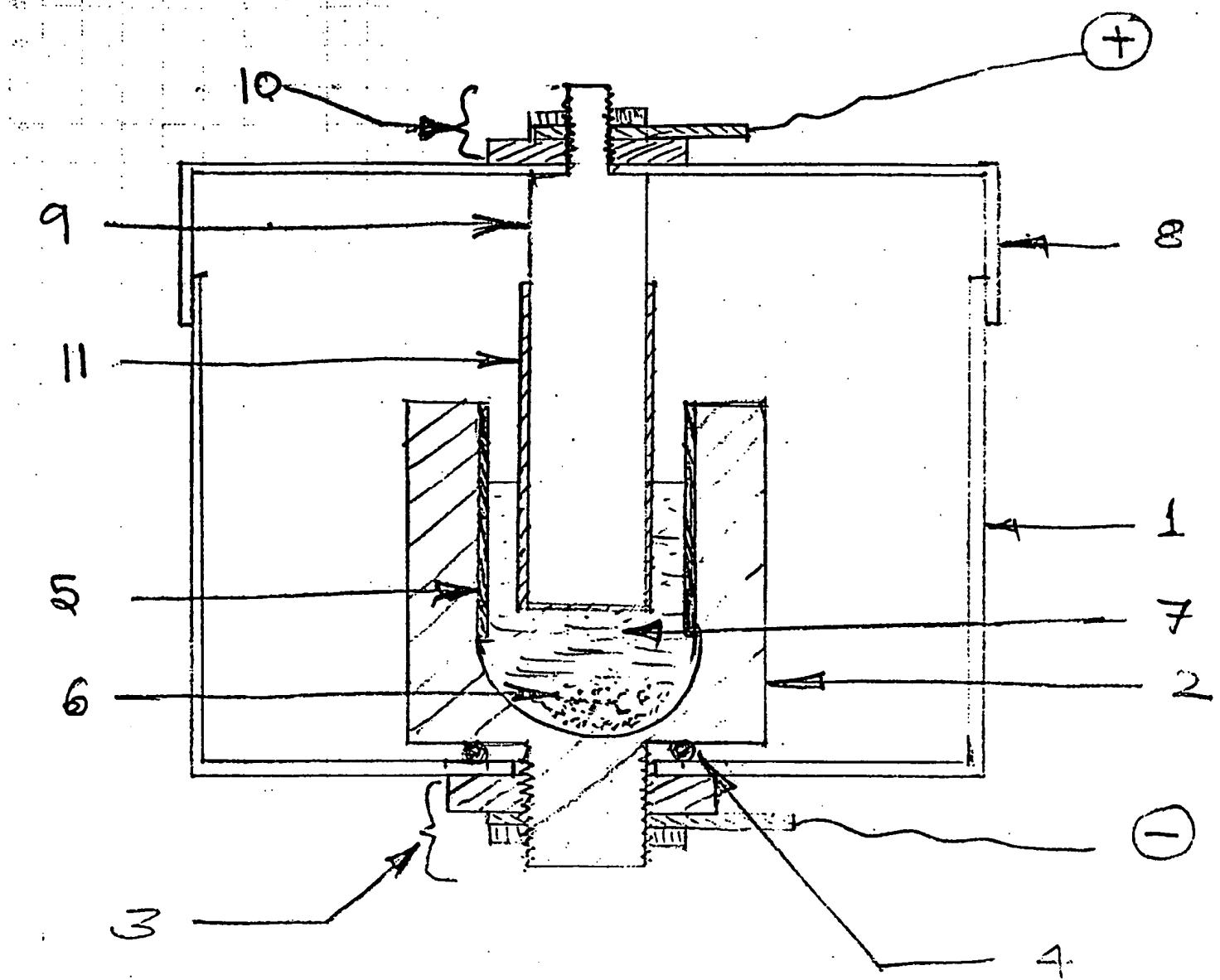


FIGURE 4

SUBJECT

IBM

Thomas J. Watson Research Center

BY

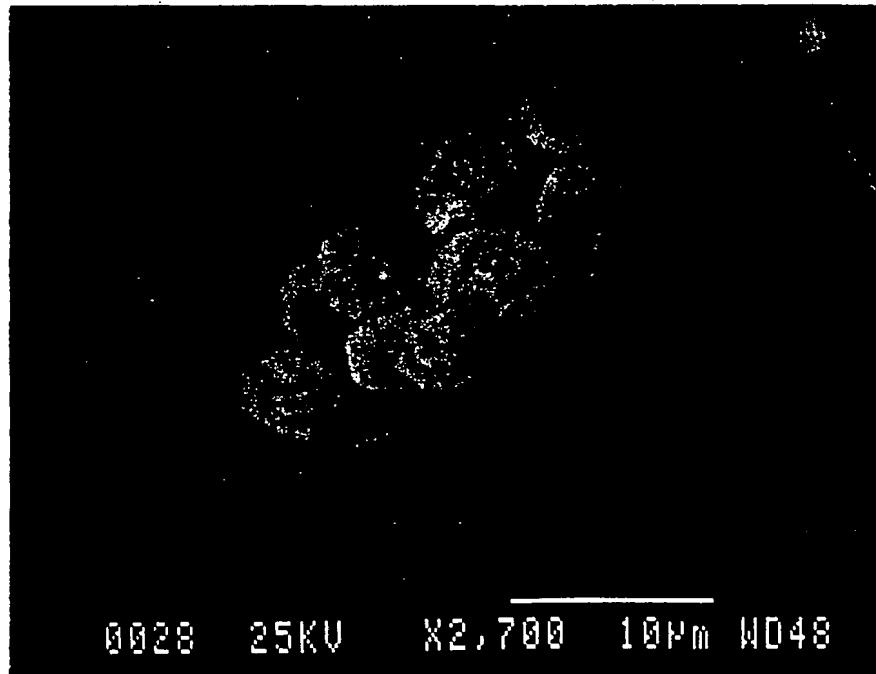
DATE

FILE

SECTION

SHEET

OF



10
20
30

0028 25KV X2,700 10μm WD48

FIGURE 5

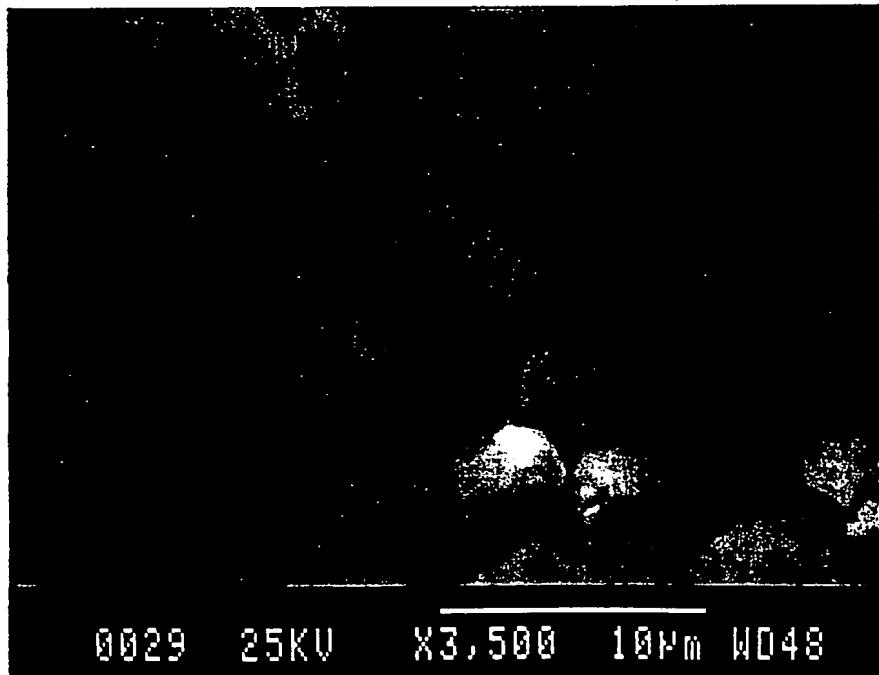


FIGURE 6

FIGURE 8

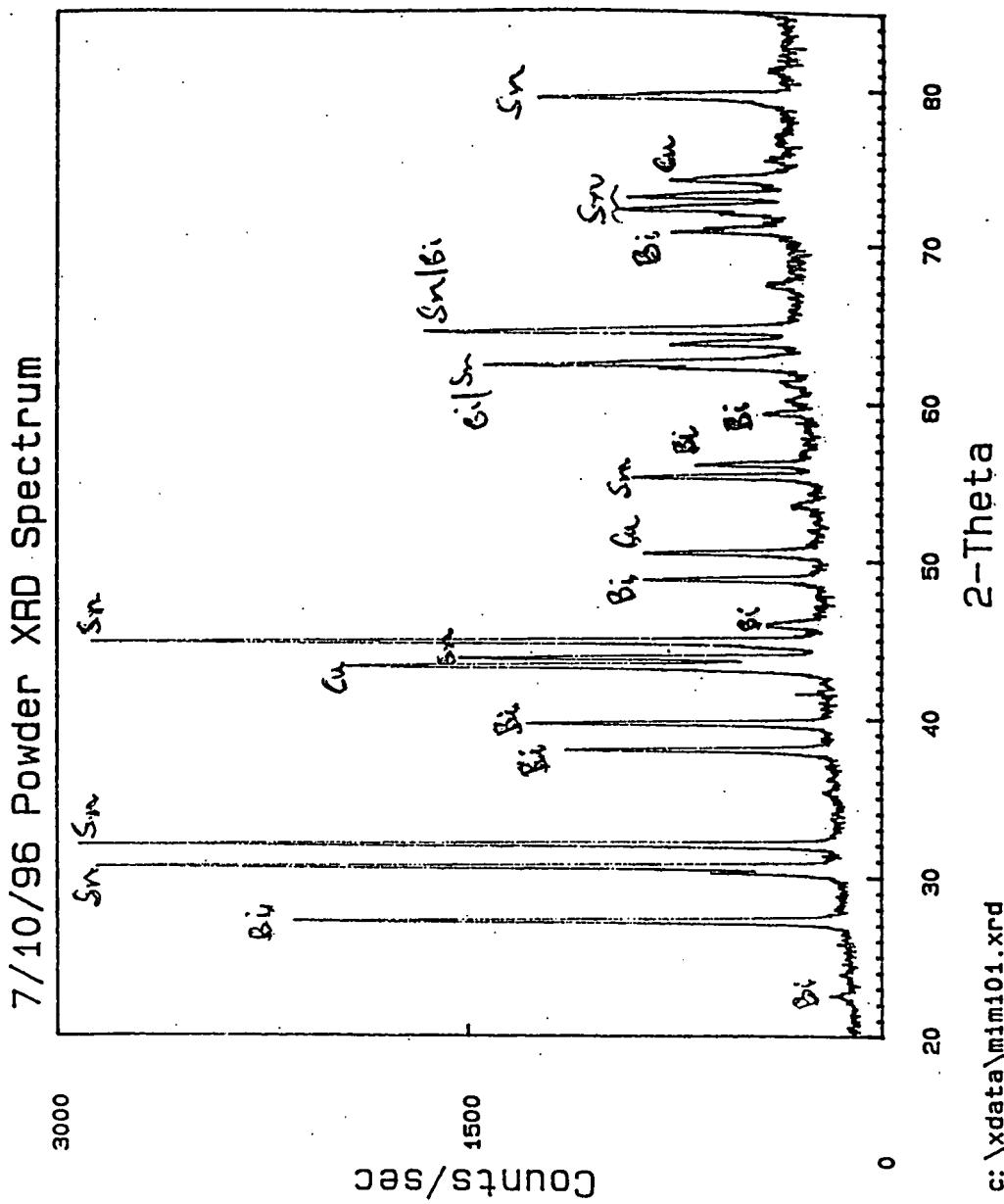


FIGURE 9 S.K. KANG ET AL.

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DSC          <Sample>           <Comment>           <Temp. program[°C]> [°C/min] [min]>
             sp-1-19 Bi/Sn      Bi/Sn Run #1      i* 70.0- 300.0   10.00   0.00
             7.320 mg          ----->----->----->----->----->
             jkg:Snsp19A     <Gas>           n2              0.0 ml/min
             <Reference>       ----->----->----->----->----->----->
             96/07/01 13:17    0.000 mg        <Sampling>      0.0 sec
                                         0.5 sec

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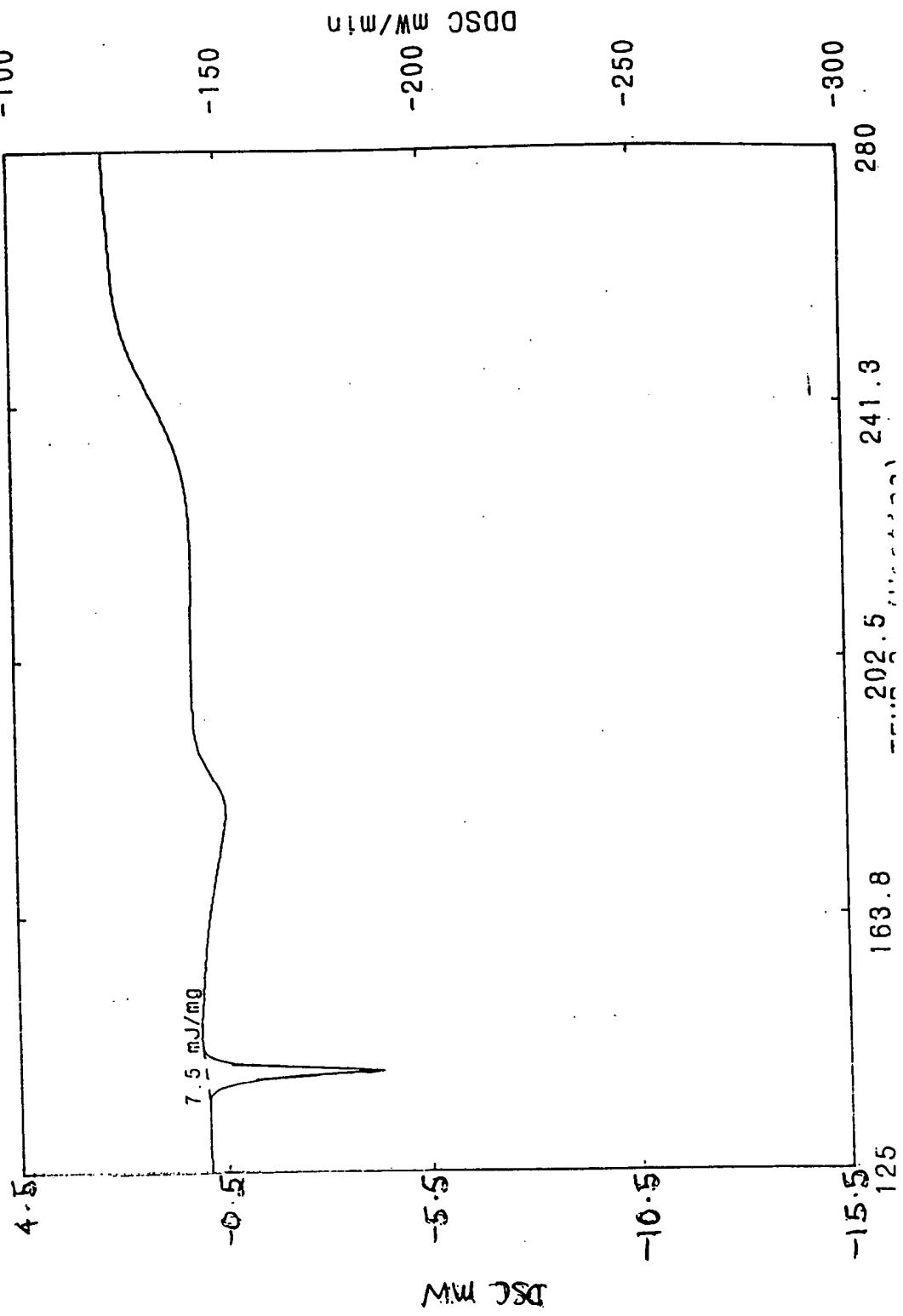
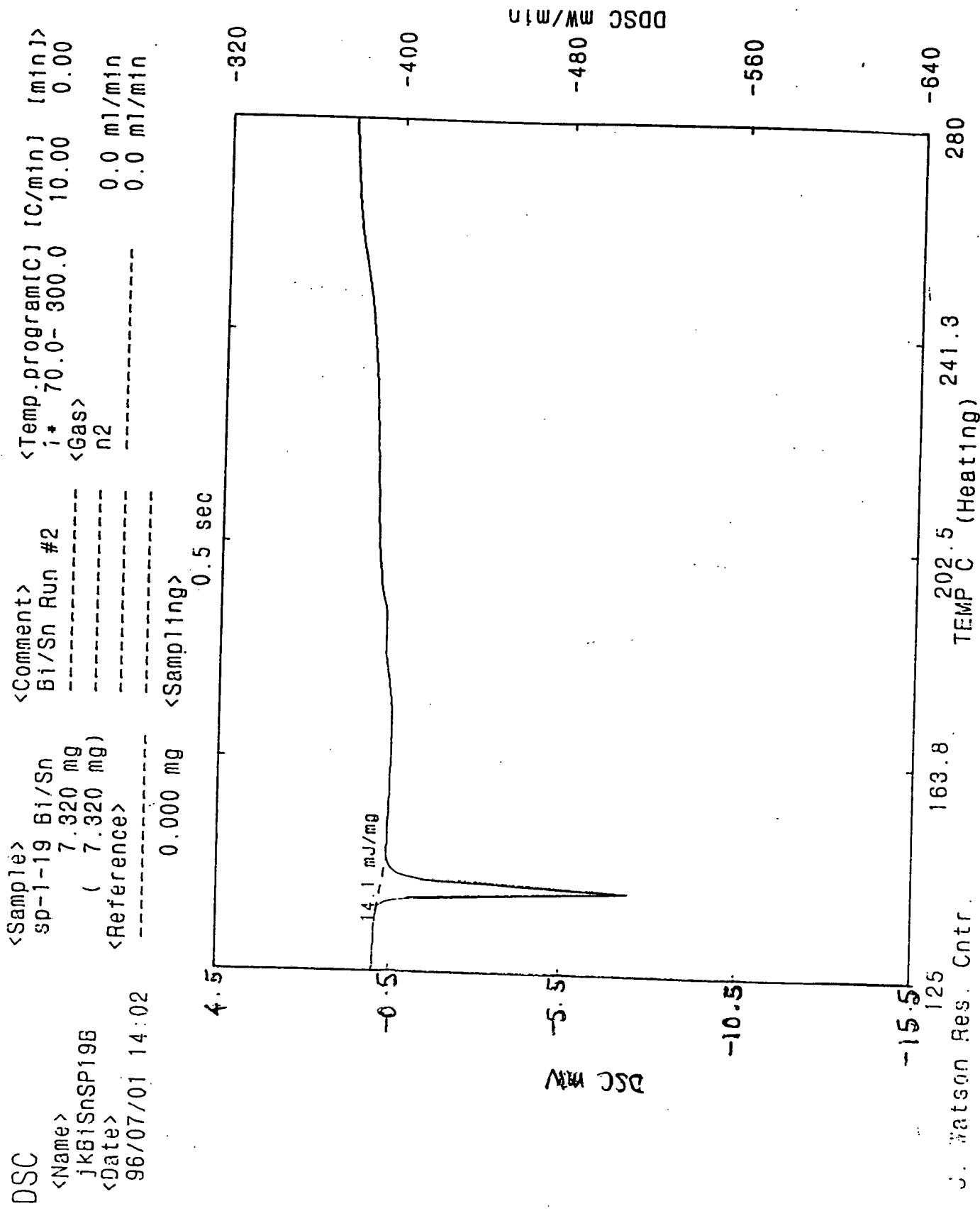


FIGURE 10 . S.K. KANG ET AL.



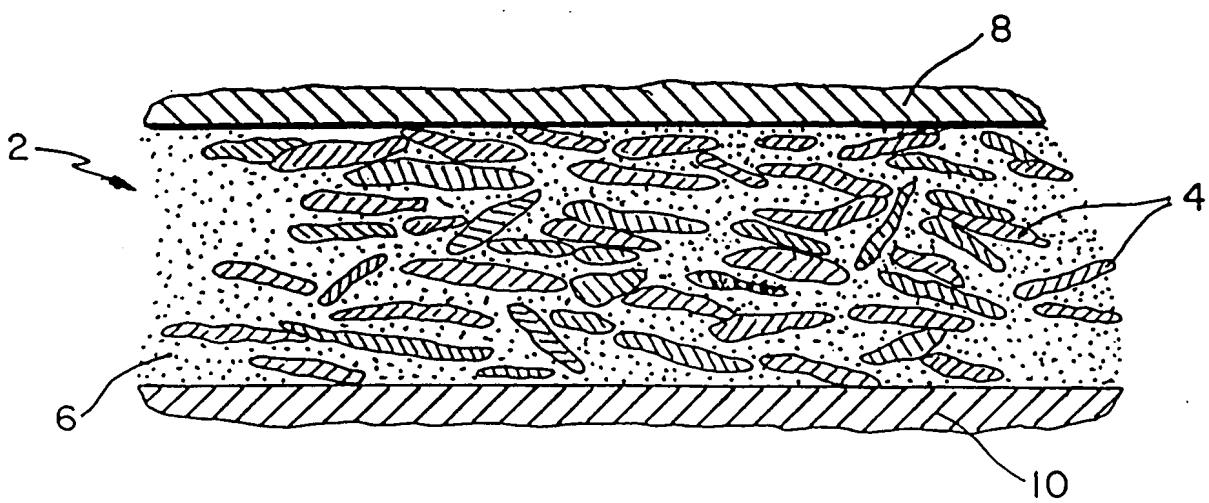
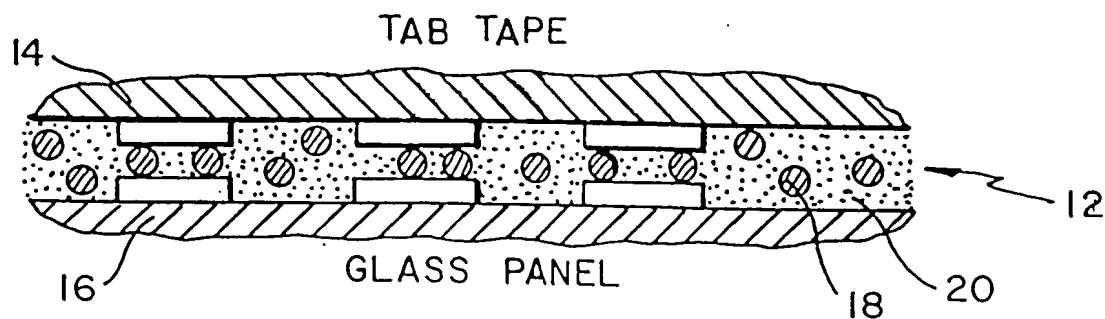
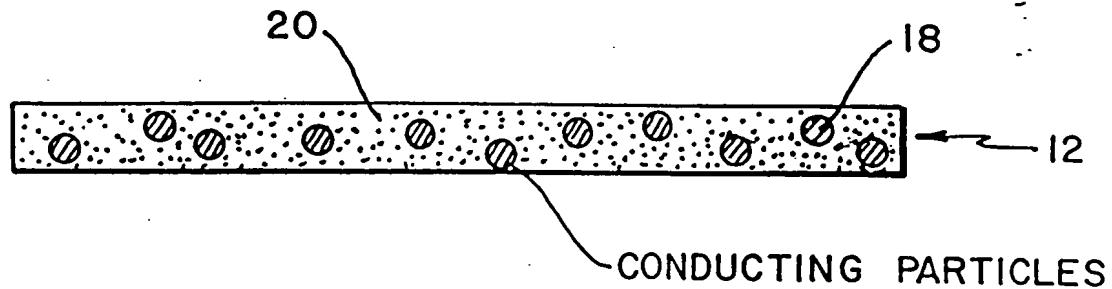


FIG. 1

FIG. 2A**FIG. 2B**

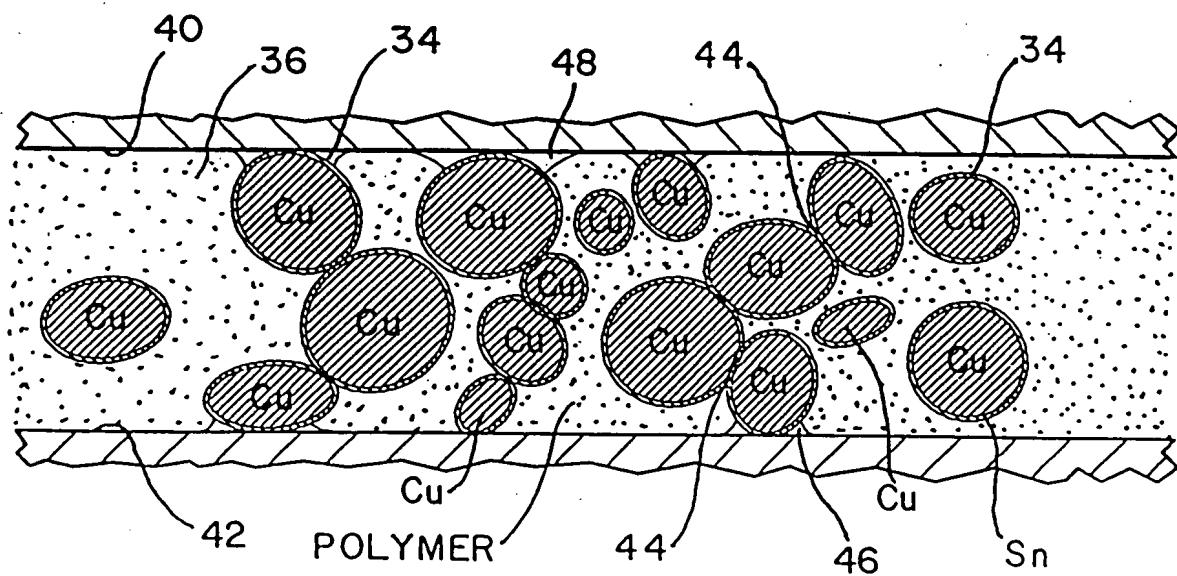


FIG. 3

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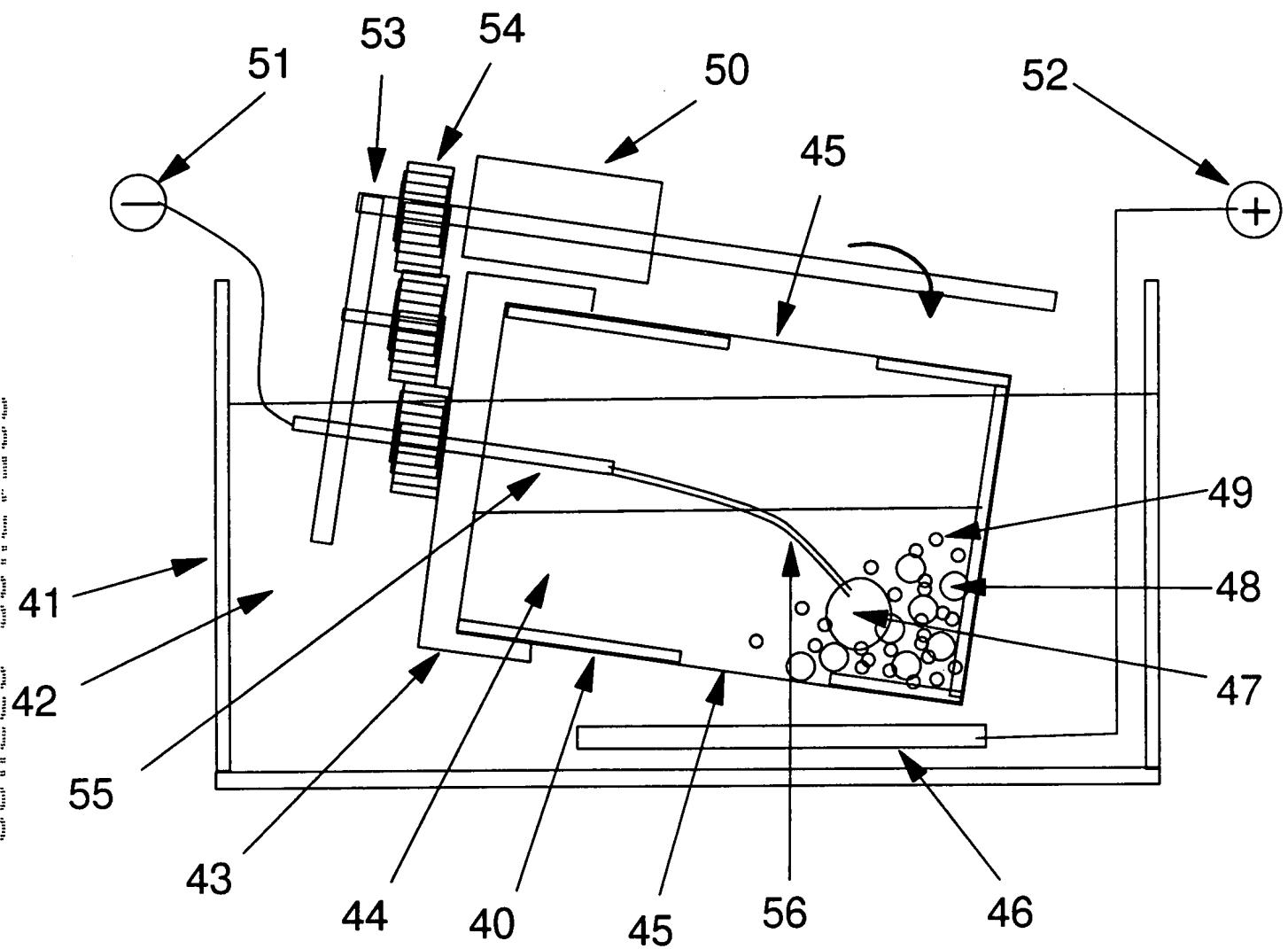


Figure 4

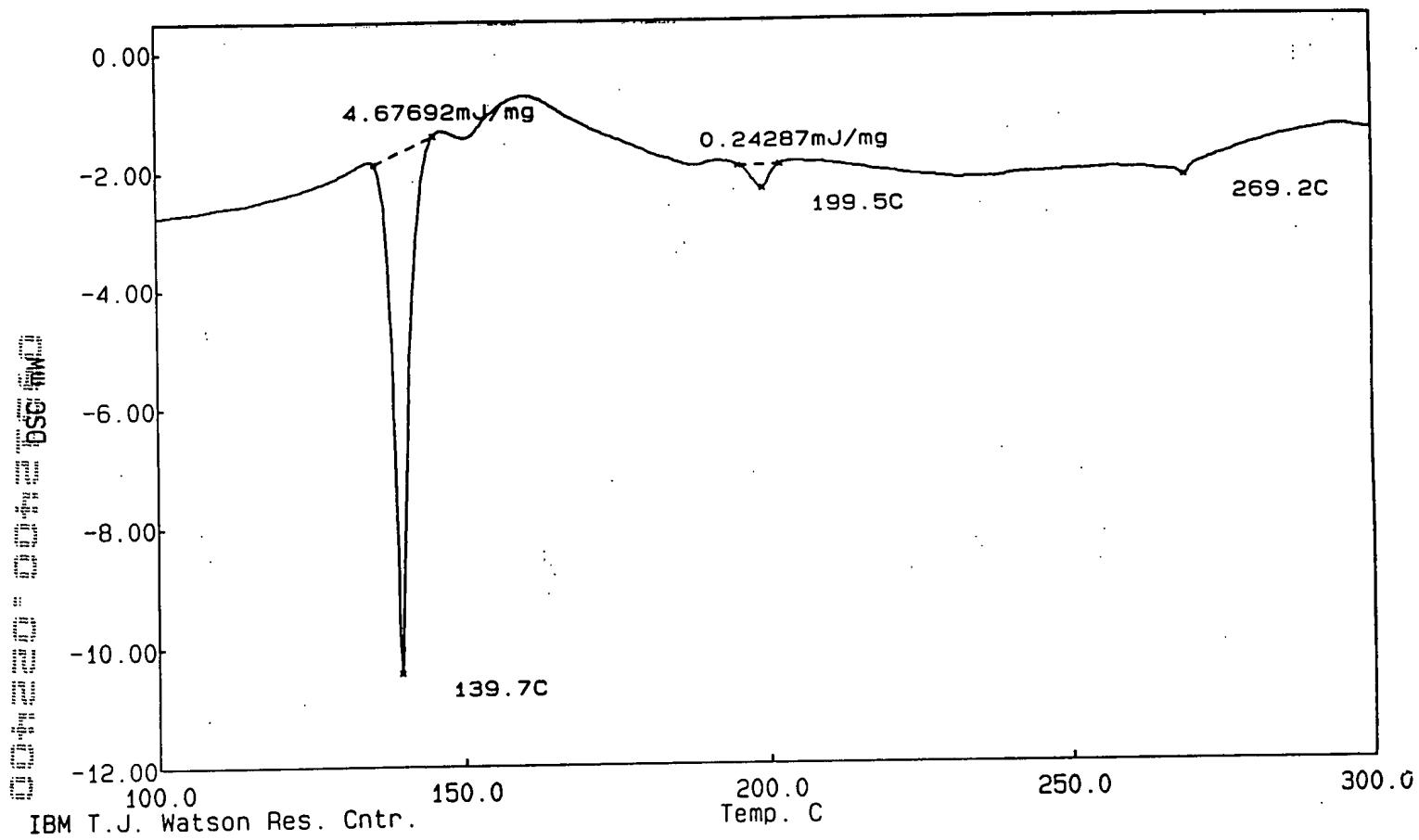


Figure 5

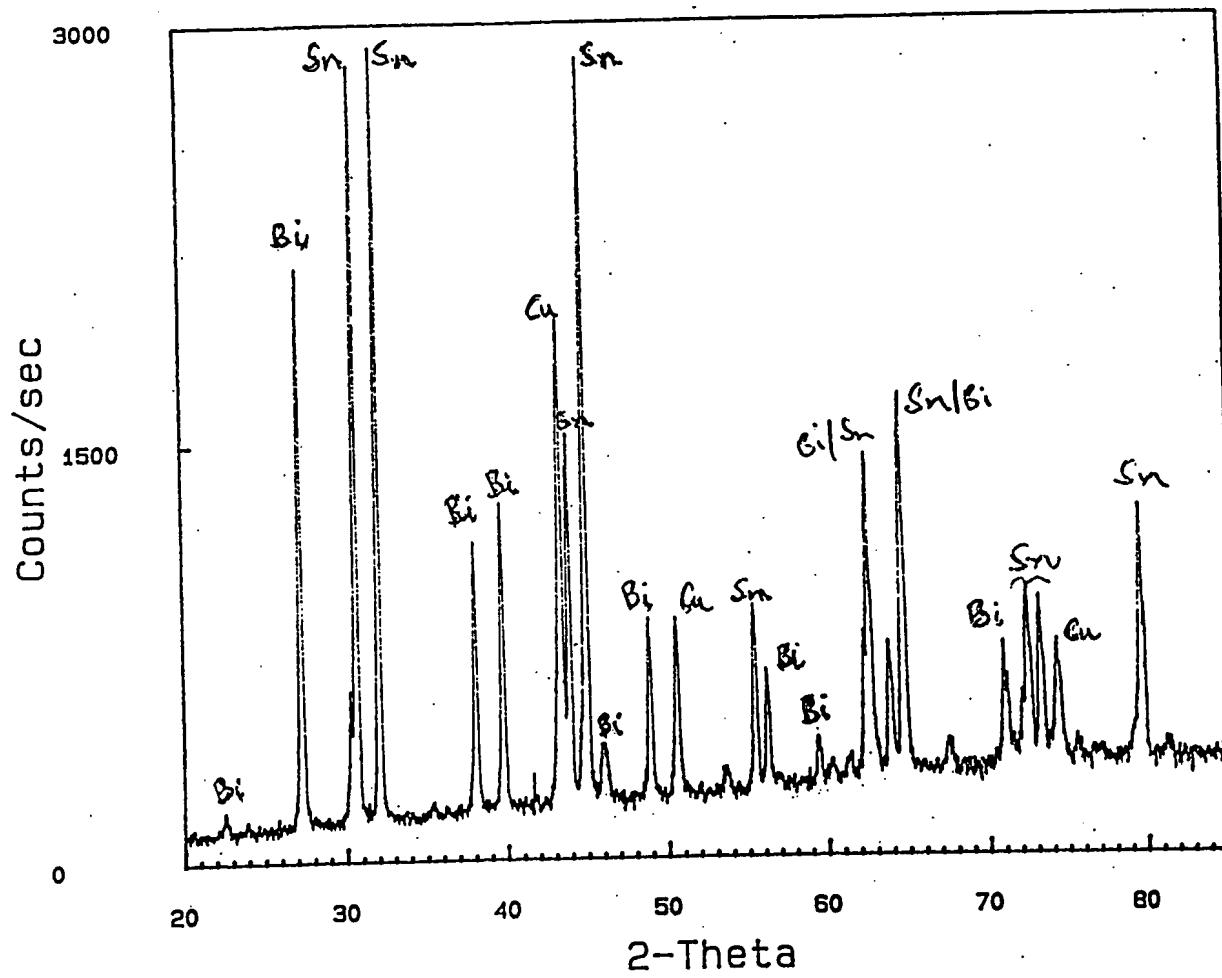


Figure 6